AMENDMENTS TO THE DRAWINGS

Applicant herein amends Figures 1 and 2 to remove the French word "ou" and replace it with the English word "or" in the second column of the tables shown in Figures 1 and 2.

Attachment: Two (2) Replacement Sheets

REMARKS

Claims 1-24 have been examined on their merits.

Applicants herein cancel claims 12-14.

Applicant thanks the Patent Office for indicating that claims 15-20 are allowed.

Claims 1-11 and 15-24 are all the claims presently pending in the application.

1. Claim 21 stands rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Walker *et al.* (U.S. Patent No. 6,320,918). Applicant traverses the § 102(e) rejection of claim 21 for at least the reasons discussed below.

Walker *et al.* disclose, *inter alia*, a procedure for reducing interference in the transmission of an electrical communication signal. Walker *et al.* select a suppression method according to the interference signal type. As shown in Fig. 1 of Walker *et al.*, the received signal x(k) is analyzed in time ranges established by circuit blocks 31 ...3n, each of which is allocated to a characteristic detector 21 ...2n. Using the group of characteristic detectors 21 ... 2n, an analysis is made of which interference signals typical of the time range are contained at which amplitude and phase length in the currently received time signal. The interference is classified as clicks, crackles, rumbles or noise interference signals and the time of their occurrence is marked. Depending on the type of the interference signal, different modules from 4, 5, 6 and 7 is selected for the reduction of interference signals.

Figure 6 of Walker *et al.* illustrates the reduction of a pulse disturbance using linear interpolation. After establishing the time range 31 of the disturbance, the pulse disturbance is

removed using interference blanking 4 and replaced with a linear interpolation 5. Walker *et al.* disclose that one characteristic of the pulse disturbance is that the average value of the faulty voice signal over a very short time is greater than the short time average.

Figure 7 of Walker *et al.* illustrates the interference blanking of a rumble disturbance. After the characteristic analysis using the characteristic detector 21 and the establishment of the time range 31, a known rumble disturbance is removed from the voice signal x(k) using interference blanking 4. One characteristic of the rumble disturbance is that the short time average value of the faulty voice signal x(k) is greater than the long time average value.

In short, in Figure 6, Walker *et al.* disclose using the very short time average value and the short time average value of the faulty voice signal to identify the pulse disturbance and then selecting the interference blanking module 4 and the linear interpolation module 5 to remove the pulse disturbance. In Figure 7, Walker *et al.* disclose using the short time average value and the long time average value of the faulty voice signal x(k) to identify the rumble disturbance and selecting the interference blanking module 4 to remove the rumble disturbance.

The average values in Walker *et al.* are used to identify the type of interference signal. However, Walker *et al.* do not teach or suggest an average of radio measurement results including a first average if a predetermined condition is not met, or a second average if the predetermined condition is met.

In addition, in Walker *et al.*, the modules for interference signal reduction are selected according to the type of interference signal, which is identified by average values of the faulty voice signals over the very short time, the short time and the long time. However, Walker *et al.*

do not teach or suggest selecting a coding and/or modulation scheme as a function of the radio conditions represented by an average of radio measurement results, which could be a first average or a second average depending on whether a predetermined condition is met.

Based on the foregoing reasons, Applicant submits that claim 21 is allowable over Walker *et al.*, and requests that the Patent Office reconsider and withdraw the § 102(e) rejection of claim 21.

2. Claims 1-3 and 21-24 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Heinzeiman *et al.* (U.S. Patent No. 6,754,651) in view of Minde *et al.* (U.S. Patent No. 6,157,830) or, in the alternative, Bullock *et al.* (U.S. Patent No. 5,764,651).[1] Applicant traverses the § 103(a) rejection of claims 1-3 and 21-25 for at least the reasons discussed below.

The Patent Office acknowledges that Heinzeman *et al.* fail to teach the time factors or duration when factoring an average measurement. However, the Patent Office alleges that Minde *et al.* or Bullock *et al.* overcomes the acknowledged deficiencies of Heinzeman *et al.* Applicant respectfully disagrees.

Heinzelman *et al.*, disclose, *inter alia*, unequal error protection channel coding for compressed video of portable multimedia terminals with data partitioning by using highest error protection for packet header and bit stuffing, next highest error protection for motion data, and

[1] The May 24, 2005 Final Office Action indicates that claim 25 was rejected over this combination of references. This is a typographical error, since the application presently lacks a claim 25.

the lowest error protection for texture data. Compressed bitstreams were channel coded to achieve the unequal error protection rates shown in Table 2 of Heinzelman *et al.*

In Heinzelman *et al.*, the coded sequences were sent through a GSM channel simulator with different BER and carrier to interference ratios (C/I) shown in Table 3. Heinzelman *et al.* disclose using different channel coding rates, and using a more powerful codes to reduce the BER. However, all these occur in an experiment for proving the advantages of the unequal error protection channel coding, not during a link adaptation.

As argued in the December 9, 2004 Rule 111 Amendment, Heinzelman *et al.* fail to teach or suggest at least considering the rate at which the radio conditions are degrading, fail to teach or suggest at least selecting a more rugged or less rugged coding scheme according to the rate at which the radio conditions are degrading, and fail to teach or suggest at least including in an average of radio measurement results an average over a short period or a long period according to the rate at which the radio conditions are degrading.

Minde *et al.* is related to speech quality measurement. As shown in Figs. 2 and 3 of Minde *et al.*, bit errors are received and detected by a mobile station (MS) 16 and a bit error rate (BER) 18 is calculated and sent to a temporal processing stage 32. A frame erasure rate (FER) 10, a received signal level (RxLev) 22, and a handover parameter 24 are also obtained from the receiver 16 and sent to the stage 32. The temporal processing stage 32 extracts temporal information from parameters by examining their previous activity during a specified time interval (Minde *et al.*, col. 5, lines 45-47). For example, the mean BER during the last 5 seconds are representatives of new temporal parameters for deriving parameters more closely related to

an aspect of speech quality (Minde *et al.*, col. 5, lines 52-56). A correlation stage 34 correlates the original or newly calculated temporal parameters to produce correlated parameters which are more directly related to speech quality. An estimator stage 36 uses the correlated parameters to calculate an estimate of the perceived speech quality.

The speech quality measurement method of Minde *et al.* is used by cellular operators to determine which area in the network are experiencing quality problems. The measurement does not occur during the link adaptation either.

As argued in the December 9, 2004 Rule 111 Amendment, although Minde *et al.* mention the calculation of a mean BER during a specified time interval, Minde *et al.* do not teach or suggest considering the rate at which the radio conditions are degrading. Thus, Minde *et al.* do not supply any deficiency of Heinzelman *et al.*

Applicant argued in the December 9, 2004 Rule 111 Amendment that it is improper for the Patent Office to combine Heinzelman *et al.* and Minde *et al.*, because Heinzelman *et al.* was directed towards providing a channel coding to protect compressed video bitstreams, and Minde *et al.* was directed towards measuring speech quality in a mobile cellular telecommunications network.

The Patent Office argues that the combination of the references is reasonable because the references are directed to measuring BER and then making decisions or adjustments based on such measurements. Applicant respectfully disagrees. BER is a basic measurement of signal transmission, both wired and wireless. Nearly all improvements about signal transmission

quality are based on measuring BER then making decisions based on such measurement. This is far from enough for suggesting a skilled artisan to combine the references.

The Patent Office further argued that the combination of the references is reasonable because Heinzelman *et al.* could be applied in the GSM or wireless channel environment. Applicant respectfully disagrees. So far, there are more than 12,000 U.S. patents relate to the GSM system. Simply being applicable in the GSM system does not make instantly render Heinzelman *et al.* and Minde *et al.* a desirable combination. In addition, as discussed above, Heizelman *et al.* and Minde *et al.* are about different aspects of the GSM system: one about video signal compression, and the other about speech quality measurement.

The Patent Office further argued that the combination of Heinzelman *et al.* and Minde *et al.* teaches the ability to configure BER in part based on time factors and radio/network condition. However, as discussed above, neither of these two references considers the rate at which the radio conditions are degrading.

Based on the foregoing reasons, Applicant submits that claim 1 is allowable over the combination of Heinzelman *et al.* and Minde *et al.*, and further submits that claims 2 and 3 are allowable as well, at least by virtue of their dependency from claim 1. Thus, Applicant requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claims 1-3.

With respect to independent claim 21, Applicant submits that claim 21 is allowable over the combination of Heinzelman *et al.* and Minde *et al.* for at least reasons analogous to those discussed above with respect to claim 1, and further submits that claims 22-24 are allowable as

well, at least by virtue of their dependency from claim 21. Thus, Applicant requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claims 21-24.

Bullock *et al.* is related to a bit error rate detection system. Bullock *et al.* disclose, *inter alia*, a method for detecting error rates in a synchronous optical network (SONET) data stream. As shown in Figure 5 of Bullock *et al.*, an error rate threshold is determined at step 10, and a frame sampling window based on a known error rate is determined at step 12. At step 14, the data stream is monitored during the specified total window length, and the number of errors is counted for the duration of the total window length. If the cumulative number of errors counted in the total window length exceeds the threshold, the total window length is shortened at step 16. Otherwise, the window length is increased. When the window length falls below a minimum, a signal fail indication is generated.

Bullock *et al.* discuss the number of errors in a specified total length, but fails to teach or suggest considering the rate at which the radio conditions are degrading. Thus, Bullock *et al.* fails to overcome the acknowledged deficiencies of Heinzelman *et al.*

As argued in the December 9, 2004 Rule 111 Amendment, Bullock *et al.* is related to an optical system, instead of a mobile radiocommunication system. It is improper for the Patent Office to combine the two references.

The Patent Office argued that the two references are related, because Bullock *et al.* is directed to a method of BER detection. Applicant respectfully disagrees. As discussed above, being related to BER is far from enough for suggesting a skilled artisan to combine the references.

Based on the foregoing reasons, Applicant submits that claim 1 is allowable over the combination of Heinzelman *et al.* and Bullock *et al.*, and further submits that claims 2 and 3 are allowable as well, at least by virtue of their dependency from claim 1. Thus, Applicant requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claims 1-3.

With respect to independent claim 21, Applicant submits that claim 21 is allowable over the combination of Heinzelman *et al.* and Bullock *et al.* for at least reasons analogous to those discussed above with respect to claim 1, and further submits that claims 22-24 are allowable as well, at least by virtue of their dependency from claim 21. Thus, Applicant requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claims 21-24.

3. Claims 4-10 and 12-14 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Heinzeiman *et al.* (U.S. Patent No. 6,754,651) in view of Minde *et al.* (U.S. Patent No. 6,157,830) or, in the alternative, Bullock *et al.* (U.S. Patent No. 5,764,651), and in further view of Dohi *et al.* (U.S. Patent No. 6,341,224). The rejection of claims 12-14 is now moot due to their cancellation. Applicant traverses the 35 U.S.C. § 103(a) rejection of claims 4-10 for at least the reasons discussed below.

Dohi *et al.* disclose, *inter alia*, a power controller for mobile communication system, wherein an error rate of received signal is measured by a received signal error measuring unit, and a target signal-to-interference plus noise power ratio (SIR) is changed by a target SIR decision unit using the error rate. Dohi *et al.* fail, however, to overcome the deficiencies of either the combination of Heinzelman *et al.* and Minde *et al.* or the combination of Heinzelman

et al. and Bullock *et al.* Since claims 4-10 depend from claim 1 and incorporate all its recitations, Applicant submits that claims 4-10 are allowable at least by virtue of their dependency from claim 1. Thus, Applicant requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claims 4-10.

4. Claim 11 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Heinzeiman *et al.* (U.S. Patent No. 6,754,651) in view of Minde *et al.* (U.S. Patent No. 6,157,830) or, in the alternative, Bullock *et al.* (U.S. Patent No. 5,764,651), and in further view of Dohi *et al.* (U.S. Patent No. 6,341,224), and in further view of Chennakeshu *et al.* (U.S. Patent No. 5,406,593).

Chennakeshu *et al.* disclose, *inter alia*, a method of estimating the quality of a communication channel from a differential phase angle between a received signal and the corresponding transmitted phase angle. Chennakeshu *et al.* fail, however, to overcome the deficiencies of either the combination of Heinzelman *et al.* and Minde *et al.* or the combination of Heinzelman *et al.* and Bullock *et al.* Since claim 11 depends from claim 1 and incorporates all its recitations, Applicant submits that claim 11 is allowable at least by virtue of their dependency from claim 1. Thus, Applicant requests that the Patent Office reconsider and withdraw the § 103(a) rejection of claim 11.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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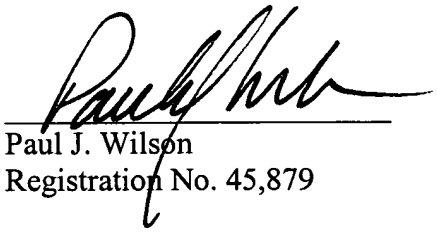

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